

Work Order ID 143431

Tuesday, March 15, 2016 11:47:45 AM

143431

Page 1

Item ID: D5122-1

Revision ID:

Item Name: Center Support, Upper

Start Date: 4/29/2016 Start Qty: 12.00

Required Date: 5/11/2016 Req'd Qty: 12.00

Reference:

Accept

N900040100

Setup Start ***NS1***

Stop ***NS2***

Cust Item ID:

Customer:

Approvals:

Process Plan: MLS

Date: MAR 17 2016

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start ***NR1***

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D5122	A

100

100

HAAS 1

HAAS CNC vertical machine #1

HAAS CNC VERTICAL MACHINING #1

Memo

Machine as per Folio FB324

Folio Rev: AA

Dwg Rev: A

Deburr

110

110

QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

Memo

0.00

0.16

0.00

0.00

DAS
14
9-39

DAS
14
9-39

16/04/08

16/04/08

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>					Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																
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Work Order ID 143431

Tuesday, March 15, 2016 11:47:45 AM

143431

Page 2

Item ID: D5122-1 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Center Support, Upper
 Start Date: 4/29/2016 Start Qty: 12.00 ***12*** Cust Item ID:
 Required Date: 5/11/2016 Req'd Qty: 12.00 ***12*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC8- Inspect parts - second check	0.00							
120									
QC	Memo	0.00		B.e 16/04/14		14	0		DAS 08 9-89
Quality Control									
121	QC5- Inspect part completeness to step on W/O	0.00							
121									
QC	Memo	0.00				14			DAS 38 9-89
Quality Control									APR 15
130	Identify as per dwg & Stock Location: _____	0.00							
130									
Packaging	Memo	0.00				14			MCS 16-04-15
Packaging	LOCATION : LG054								

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:15%;">Skid-tube ☐</td> <td style="width:15%;">Cross tube ☐</td> <td style="width:15%;">Water Jet ☐</td> <td style="width:15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____																							
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Work Order ID 143431***143431***

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Tuesday, March 15, 2016 11:47:45 AM

Item ID: D5122-1 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
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Start Date: 4/29/2016 Start Qty: 12.00 ***12*** Cust Item ID:
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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.02							
Quality Control									

MCS APR 15 2016

MCS APR 15 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐							
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval			
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval			
Root Cause		FAULT CATEGORY									
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
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Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
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Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____									
Misidentified ☐	Past Due ☐										

Picklist Print

Tuesday, March 15, 2016 11:47:44 AM

Page 1

Work Order ID: 143431

143431

Parent Item: D5122-1

D5122-1

Parent Item Name: Center Support, Upper

Start Date: 4/29/2016

Required Date: 5/11/2016

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP REV.A NEW ISSUE JFS 14/07/16 VERIFIED BY: DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D5122-1TRN		Manufactured	No			100	Each	7.0000	0.5	6			
D5122-1TRN										**		DAS	
Center Support, Upper, Turning Detail												14	
												9-89	

Location

Loc Qty

Loc Code

MAT060

7

→ 137087

7

7

16/04/08

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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DART AEROSPACE LTD		Work Order: 143431
Description: Center Support		Part Number: D5122-1
Inspection Dwg: D5122	Rev: A	Page 1 of 1

FIRST ARTICLE INSPECTION DIMENSION SHEET

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	5
HAAS Section								
AA	1.182	1.202		1.188	1.194	1.193	1.192	1.192
AB	0.090	0.110		.098	.097	.095	.095	.099
AC	0.545	0.565		.554	.552	.555	.553	.554
AD	3.690	3.700		3.699	3.698	3.698	3.698	3.696
AE	3.550	3.560		3.558	3.558	3.556	3.556	3.556
AF	2.453	2.473		2.464	2.463	2.462	2.464	2.462
AG	1.261	1.281		1.273	1.273	1.271	1.274	1.272
AH	0.150	0.210		.180	.180	.180	.180	.180
AI	0.454	0.474		.462	.462	.463	.463	.464
AJ	Ø0.260	Ø0.267		.261	.261	.261	.261	.261
AK	Ø0.188	Ø0.194		.191	.191	.191	.191	.189
AL	3.067	3.077		3.073	3.072	3.072	3.072	3.072
AM	3.990	4.010		3.999	3.999	4.004	4.004	3.998
AN	1.990	2.010		1.998	2.000	1.995	1.998	2.001
AO	Ø0.625	Ø0.630		Ø.625	Ø.625	Ø.625	Ø.625	.626
AP								
AQ								
AR								
AS								
AT								
AU								
AV								
AW								
AX								
AY								
AZ								

Ensure that Ø.625" bore is perpendicular to " bore within .005"

DAS Accept/Reject

-0025

Measured by: 14 9-89 JL	Date: 16/04/08
Audited by: DAS UB 9-89	Date: 16/04/14
Preliminary Approval:	Date:

Rev	Date	Change	Revised By	Approved
A	15.03.12	New Issue	KJ	

DART AEROSPACE LTD		Work Order:	143431
Description: Center Support		Part Number:	D5122-1
Inspection Dwg: D5122 Rev: A		Page 1 of 1	

FIRST ARTICLE INSPECTION DIMENSION SHEET

Dim	Min	Max	Go/No Go Gauge	Record Actual Dimensions				
				16	17	18	19	10
HAAS Section								
AA	1.782	1.202		1.192	1.191	1.191	1.193	1.192
AB	0.090	0.110		.100	.100	.100	.099	.100
AC	0.545	0.565		.552	.556	.557	.555	.554
AD	3.690	3.700		3.696	3.697	3.698	3.695	3.695
AE	3.550	3.560		3.557	3.558	3.558	3.556	3.556
AF	2.453	2.473		2.464	2.463	2.464	2.465	2.465
AG	1.261	1.281		1.272	1.270	1.272	1.270	1.273
AH	0.150	0.210		.180	.180	.180	.180	.180
AI	0.454	0.474		.464	.464	.464	.462	.462
AJ	Ø0.260	Ø0.267		.261	.261	.261	.261	.261
AK	Ø0.188	Ø0.194		.189	.189	.189	.189	.189
AL	3.067	3.077		3.072	3.072	3.072	3.072	3.072
AM	3.990	4.010		3.998	4.001	4.001	4.000	4.000
AN	1.990	2.010		1.997	2.006	2.005	2.001	2.003
AO	Ø0.625	Ø0.630		.626	.626	.626	.626	.626
AP								
AQ								
AR								
AS								
AT								
AU								
AV								
AW								
AX								
AY								
AZ								
Ensure that Ø " bore is perpendicular to " bore within " Accept/Reject .003 .000 .0025 .0005 .001								

Measured by:	SL	Date:	16-4-9
Audited by:	DA	Date:	16/04/14
Preliminary Approval:		Date:	

Rev	Date	Change	Revised By	Approved
A	15.03.12	New Issue	KJ	

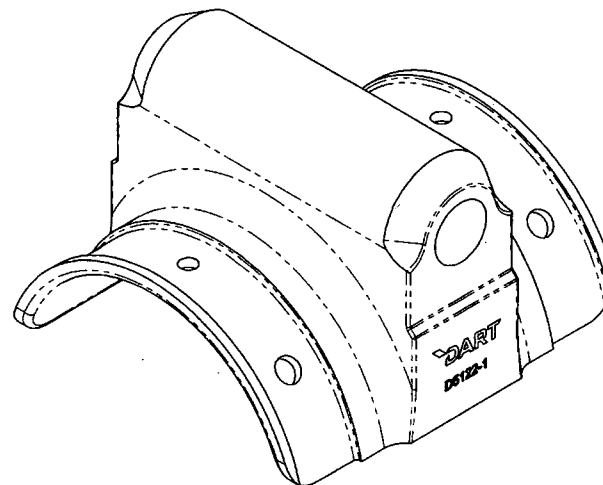
DART AEROSPACE LTD		Work Order:	143431
Description: Center Support		Part Number:	D5122-1
Inspection Dwg: D5122	Rev: A	Page 1 of 1	

FIRST ARTICLE INSPECTION DIMENSION SHEET

Dim	Min	Max	Go/No Go Gauge	Record Actual Dimensions				
				11	12	13	14	5
HAAS Section								
AA	1.782	1.202		1.190	1.192	1.191	1.192	
AB	0.090	0.110		-.099	-.099	-.098	-.098	
AC	0.545	0.565		-.557	-.555	-.555	-.556	
AD	3.690	3.700		3.695	3.695	3.695	3.695	
AE	3.550	3.560		3.556	3.556	3.555	3.555	
AF	2.453	2.473		2.462	2.461	2.463	2.462	
AG	1.261	1.281		1.270	1.269	1.271	1.269	
AH	0.150	0.210		-.180	-.180	-.180	-.180	
AI	0.454	0.474		-.465	-.465	-.465	-.465	
AJ	Ø0.260	Ø0.267		-.261	-.261	-.261	-.261	
AK	Ø0.188	Ø0.194		-.189	-.189	-.189	-.189	
AL	3.067	3.077		3.072	3.072	3.072	3.072	
AM	3.990	4.010		4.000	4.000	4.000	4.000	
AN	1.990	2.010		1.995	1.999	2.001	2.000	
AO	Ø0.625	Ø0.630		-.626	-.626	-.626	-.626	
AP								
AQ								
AR								
AS								
AT								
AU								
AV								
AW								
AX								
AY								
AZ								
Ensure that Ø .625" bore is perpendicular to " bore within .005"								
Accept/Reject				.004	.001	.0045	.003	

Measured by:	DL	Date:	16-4-9
Audited by:	He	Date:	16/04/14
Preliminary Approval:		Date:	

Rev	Date	Change	Revised By	Approved
A	15.03.12	New Issue	KJ	



D5122-1 CENTER SUPPORT

NOTES:

- 1) MATERIAL: MAKE FROM D5122-1TRN
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART LOGO AND P/N "D5122-1" IN AREA SHOWN
USING 0.125 HIGH X 0.010-0.020 DEEP LETTERING PER DART QSI 044 6.3,
IDENTIFY WITH DART B/N PER DART QSI 044 6.1
- 7) WEIGHT: 2.13 lbs
- 8) ALL NON-DIMENSIONED FEATURES DEFINED PER DRAWING FILE "D5122-1-REVA.SLDPRT"

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 143431 MJS

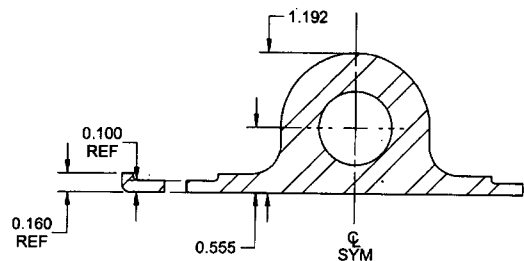
16-03-17

RELEASED
2014-08-25

A		NEW ISSUE		AP	14.06.02	
REV.		DESCRIPTION			BY	DATE
DESIGN	AP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA				
DRAWN	AP					
CHECKED	CP	DRAWING NO.		REV. A		
MFG. APPR.	JLM	D5122		SHEET 1 OF 3		
APPROVED	MP	TITLE		SCALE		
DE APPR.	DS	CENTER SUPPORT		NTS		
DATE		14.06.02				
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SECTION A-A

HOLES PERPENDICULAR
WITHIN 0.005 OVER
ENTIRE LENGTH

R0.063
AROUND INSIDE EDGE

0.464 REF

OPTIONAL Ø0.261 REF
TOOLING HOLE,
LOCATED AT 45° TO VERTICAL
4 PL

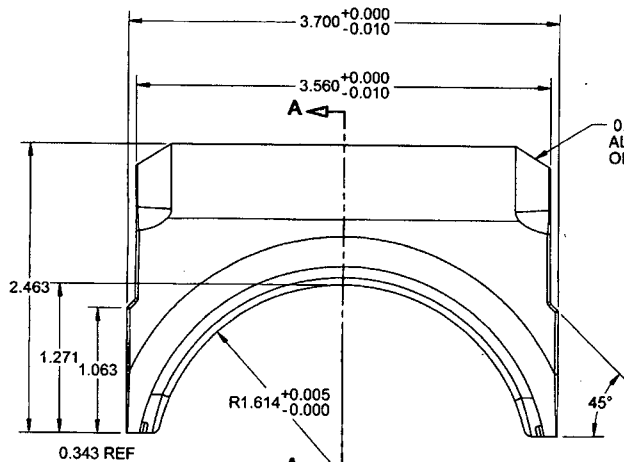
OPTIONAL Ø0.189 REF
TOOLING HOLE,
2 PL

HOLES PERPENDICULAR
WITHIN 0.005 OVER
ENTIRE LENGTH

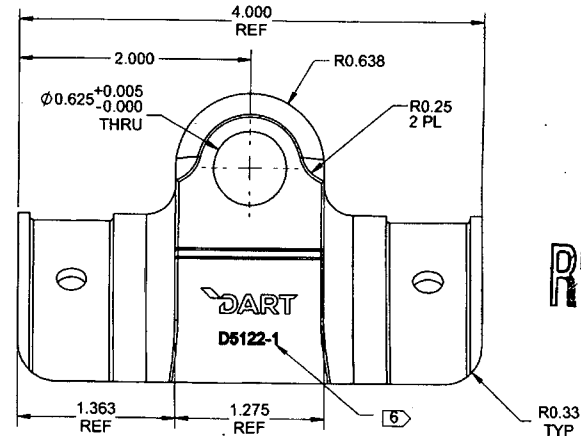
3.072 REF

4.000
REF

0.18 X 58° CMF
ALONG TOP EDGE
OF R0.638 (REF) EDGE



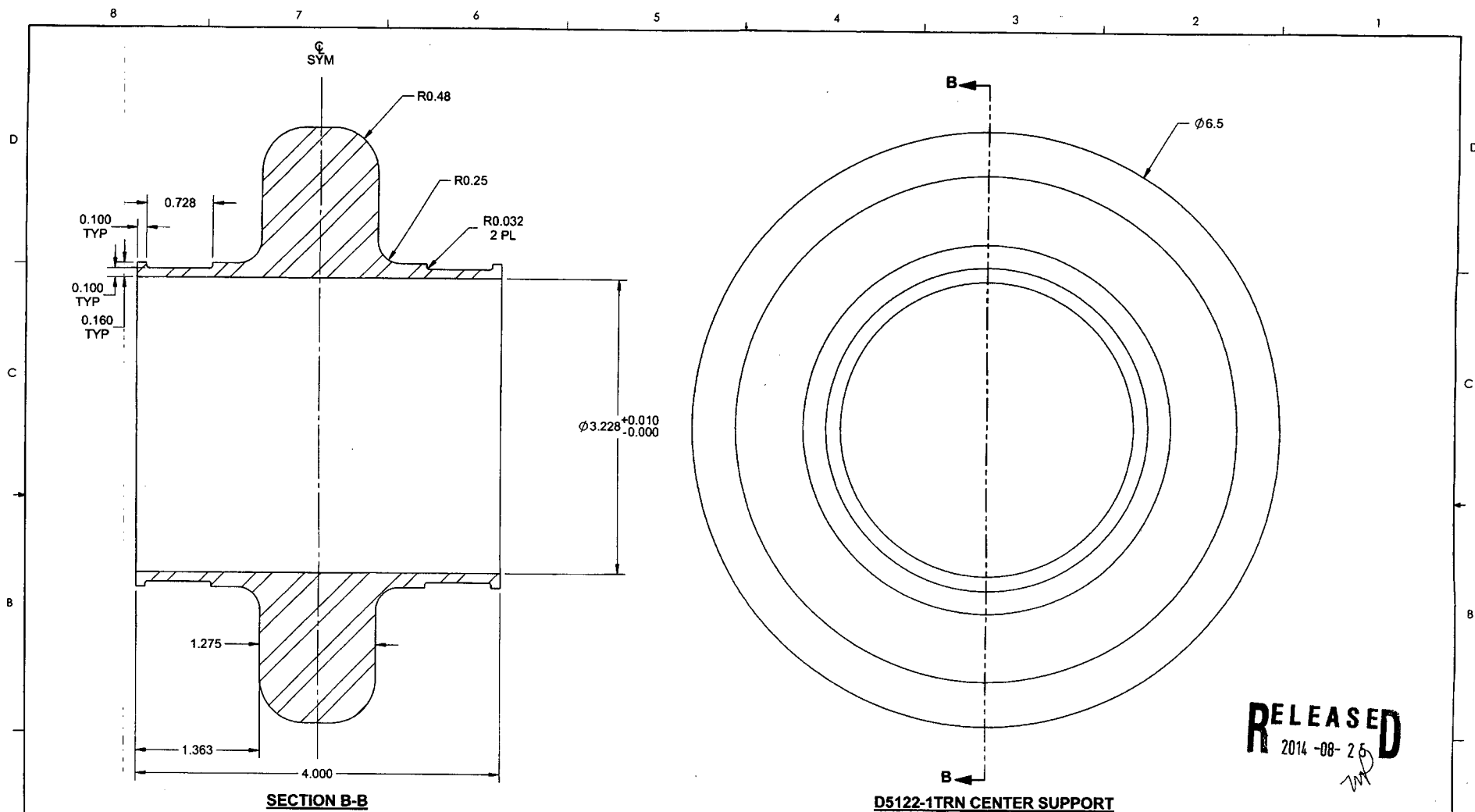
D5122-1 CENTER SUPPORT



RELEASED
2014-08-25

APPROVED

DESIGN	AP	DART AEROSPACE LTD	
DRAWN	AP	HAWKESBURY, ONTARIO, CANADA	
CHECKED	CP	DRAWING NO.	REV. A
MFG. APPR.	JLM	D5122	SHEET 2 OF 3
APPROVED	MP	TITLE	SCALE
DE APPR.	DS	CENTER SUPPORT	NTS
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RELEASED
2014-08-25

NOTES:

- 1) MATERIAL: 17-4PH/S17400/TYP 630 ROUND BAR PER AMS 5643 / ASTM A564, REF DART SPEC. M17-4-R H900 OR H925 CONDITION, MIN UTS = 170 KSI (38 HRC)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 11.25 lbs

APPROVED

DESIGN	AP	DART AEROSPACE LTD	
DRAWN	AP	HAWKESBURY, ONTARIO, CANADA	
CHECKED	CP	DRAWING NO.	REV. A
MFG. APPR.	JLM	D5122	SHEET 3 OF 3
APPROVED	MP	TITLE	SCALE
DE APPR.	DS	CENTER SUPPORT	NTS
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